

### **REMARKS/ARGUMENTS**

This paper is submitted in response to the Office Action mailed March 21, 2005. In the Office Action, the Examiner objected to the drawings under 37 C.F.R. § 1.83(a). Claims 7, 10, 32, 33, and 44 were objected to because of informalities. The Examiner rejected Claims 1-5, 8-20, 22-26, 28-28, 40-46, and 48-50 under 35 U.S.C. §102(e) as being anticipated by Ibe et al. (United States Patent No. 6,639,160). Claims 1, 4, 5, 8-14, 16-20, 22, 25, 26, 28-33, 37, 38, and 40-49 were rejected under 35 U.S.C §102(b) as being anticipated by Durrani (United States Patent No. 5,738,369). Additionally, claims 1, 4-6, 33, and 37-39 were rejected under 35 U.S.C. §102 (b) as being anticipated by Chen et al. (United States Patent No. 5,228,362). Claims 7 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ibe et al. (United States Patent No. 6,639,160). Claim 21 was objected to under 35 U.S.C. §103(a) as being unpatentable over Ibe et al. (United States Patent No. 6,639,160) in view of Anglsperger et al. (DE 19725684 C1).

By this paper, claims 1, 4, 10, 22, 25, 32-34, 44, 45, 47, and 50 have been amended. Support for the amendment of claims 1, 22, and 45 may be found in the specification at page 7, lines 5-18. Support for the amendment of claim 34 and 50 may be found in the specification at page 8, lines 1-5. Claims 6-7 and 14-15 have been canceled. New claims 51-54 have been added. Support for new claims 51, 52, and 54 may be found in the specification at page 7, lines 5-18. Support for new claims 53 may be found generally in the specification and in Figures 2-5. In view of these amendments and the following remarks, immediate allowance of claims 1-5, 8-13, and 16-54 is respectfully requested.

### **OBJECTION OF DRAWINGS**

In the Office Action, the Examiner objected to the drawings under 37 CFR 1.83(a). Figures 3 and 5 of the drawings have been corrected to show the compressed position of the steering wheel assembly as indicated by the Examiner to show the movement discussed in the specification on pages 13, 15, 17, 19, and 20. No new matter has been added.

**Amendments to the Drawings:**

The attached sheets of drawings include changes to Figs. 3 and 5. These sheets, which include Figs. 3 and 5, replace the original sheets including Figs. 3 and 5. In Figures 3 and 5, the compressed position of the steering wheel assembly has been corrected as indicated by the Examiner to show the movement discussed in the specification on pages 13, 15, 17, 19, and 20.

Attachment: Replacement Sheets

OBJECTION OF CLAIMS 7, 10, 32, 33, AND 44

In the Office Action, the Examiner objected to claims 7, 10, 32, 33, and 44 for informalities. Claim 7 has been canceled. Claims 10, 32, 33, and 44 have been amended as suggested by the Examiner.

REJECTION OF CLAIMS 1-5, 8-20, 22-26, 28-38, 40-46, AND 48-50 UNDER 35 U.S.C. §102(e)

In the Office Action, the Examiner rejected claims 1-5, 8-20, 22-26, 28-38, 40-46, and 48-50 under 35 U.S.C. §102(e) as being anticipated by United States Patent No. 6,639,160 to Ibe et al. (hereinafter "Ibe"). However, Ibe does not disclose each and every element as set forth in claims 1-5, 8-13, 16-20, 22-26, 28-38, 40-46, and 48-50. As noted above, claims 14-15 have been canceled.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131 (*quoting Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Id.* (*quoting Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). In addition, "the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

Independent claim 1 has been amended to provide "when the airbag cover is moved from the normal position to a compressed position a gap is produced at the interface between the airbag cover and the intermediate portion." Claims 2-5, 8-13, and 16-20 depend from independent claim 1 and thus, also include this claim language. The Examiner stated on page 7 of the Office Action that Ibe does "not specifically disclose a "gap" being produced at the interface between the cover (#40) and the intermediate portions (#82A, 82B) when the upper housing is depressed from the normal to the compressed position." Therefore, Ibe does not disclose each and every element of claims 1-5, 8-13, and 16-20.

As discussed in the application, a steering wheel that has with no gap in the normal position and produces a gap in the compressed position provides several advantages over the prior art and Ibe. For example, the shortcomings of the current state of the art are discussed on pages 4 and 5 of the specification of the application.

Most steering wheels are currently designed such that there is a gap or opening that separates the airbag module from the adjoining section of the steering wheel. The reason for this gap is that steering wheel manufacturers believe that in order to allow the horn switch and/or the center portion to depress during actuation of the horn assembly, the horn assembly must be completely separated from the airbag module. ... By requiring a gap to surround the airbag module, the overall complexity and sophistication of the steering wheel is greatly increased. ... Moreover, including a gap on a steering wheel has a further limitation in that over the life of the vehicle, containments such as dirt, dust, moisture, and the like tend to collect and accumulate within the steering wheel gap. This accumulation of dirt makes the steering wheel undesirable and visually unappealing to most consumers. ... In addition, placing a gap on the steering wheel is very inviting to curious children and others that like to poke, pick, scratch, or otherwise tamper with the steering wheel. ... Current automotive industries continue to increase the requirement for improved cosmetic and appearance of steering wheel to airbag fist to compete in the market, thus requiring closely held gaps and tolerances of mating surfaces.

In contrast, the claimed invention is able to provide the functional advantage of a gap separating the airbag module from the adjoining section of the steering wheel when depressing the airbag module from a normal to a compressed position without requiring closely held gaps and tolerances of mating surfaces. Additionally, having no gap in the normal position prevents dirt, dust, moisture, and the like from accumulating within the steering wheel.

Because Ibe does not disclose each and every element of claims 1-5, 8-13, and 16-20, Ibe does not anticipate claims 1-5, 8-13, and 16-20.

Independent claim 22 has been amended to provide "the intermediate portion comprising an overhanging portion constructed to overlap the airbag cover." Claims 23-26 and 28-32 depend from independent claim 22 and thus, also include this claim language. Similarly, claim 46 depends from independent claim 45, which has been amended to provide "the overhang portion overlaps a portion of the airbag cover." Ibe does not disclose this claim language.

However, in the Office Action on page 4, the Examiner stated that Ibe discloses an “intermediate portion [that] includes an overhanging portion (portion beneath slot #92).” However, the portion beneath slot #92 does not overlap the airbag cover #40, which is clear in Figure 6B of Ibe. Instead, Ibe in column 7, lines 5-12, discloses that:

since the switch assemblies 82A and 82B are prevented from moving in the axial direction of the metal core 12, compressive deformation of the compression coil springs 72 due to depressing operations of various switches (for example, the shift-up switch 88) arranged on the switch assemblies is prevented. Therefore, accidental operation of the alarm horn device accompanying the operation of various switches is prevented.

In other words, the switch assemblies 82A and 82B and the pad member 24 are disposed so as not to interfere with each other, which would occur if they overlapped. Specifically, Ibe does not want forces applied to the intermediate portions to cause the operation of the horn, which would be annoying to an operator of the steering wheel of Ibe and nearby persons. Therefore, Ibe does not disclose an overhanging portion constructed to overlap the airbag cover.

Additionally, for Ibe to not have a gap, extremely tight tolerances must be kept between the switch assemblies 82A and 82B, the pad member 24, the lower housing (#52), and the upper housing (#26, 46, 48A, 48B, 50), which would make the invention of Ibe prohibitively expensive to manufacture. In contrast, the overhang of the claimed invention provides the advantage over Ibe of preventing dirt, dust, moisture, and the like from accumulating within the steering wheel while permitting large tolerances to be used in the manufacture of the claimed invention, thus, lowering the costs of manufacture.

Because Ibe does not disclose an overhanging portion constructed to overlap the airbag cover, Ibe does not disclose each and every element of claims 22-26, 28-32, and 45-46. Thus, Ibe does not anticipate claims 22-26, 28-32, and 45-46.

Independent claim 33 provides “an airbag cover ... comprising a shingle and ... the intermediate portion attached to the shingle.” Claims 34-38 and 40-44 depend from independent claim 33 and thus, also include this claim language. Similarly, claims 49 and 50 depend from claim 48 that provides “the intermediate portion attached to the shingle.” Ibe does not disclose this claim language.

In the Office Action on page 4, the Examiner stated that the “cover [of Ibe] comprises a “shingle” (portion on the left of #40 in figures 6A, 6B that contacts the intermediate portion). However, claims 33-38, 40-44, and 48-50 recite that the intermediate portion is attached to the shingle, which is structurally different than a shingle that “contacts” the intermediate portion. Specifically, by attaching the shingle to the intermediate portion, dirt, dust, moisture, and the like are prevented from accumulating within the steering wheel through a gap between the airbag and the intermediate portion. In contrast, a shingle that only contacts the intermediate portion still may permit dirt, dust, moisture, and the like to accumulate within the steering wheel as the shingle moves up and down the sidewall of the intermediate portion.

Additionally, by attaching the shingle loose tolerances may be used in constructing the steering wheel of the claimed invention. Conversely, the steering wheel of Ibe requires extremely tight tolerances in order to permit the shingle of Ibe to continuously contact the intermediate portion about the entire perimeter of the airbag cover and during operation.

Furthermore, if the portion on the left of #40 in figures 6A, 6B was attached to the intermediate portion, the horn portion may not be functional, because the cover may not be able to move enough to compress springs of the horn device. Specifically, the pad cover 40 moves independently of the intermediate portions 82A and 82B to operate the horn device. The pad cover 40 is attached to the base plate 26 which is moved to engage the bracket 52 attached to the intermediate portions 82A and 82B to actuate the horn device. Therefore, Ibe does not disclose each and every element of claims 33-38, 40-44, and 48-50. Thus, Ibe does not anticipate claims 33-38, 40-44, and 48-50.

Additionally, claims 34 and 50 have been amended to provide a “flex point designed to allow the cover to flex when the cover moves between a normal position and a compressed position.” The Examiner asserted in the “cover includes a flex point (#42).” However, #42 as disclosed by Ibe in column 3, lines 49-56, is a “thin-walled burst line 42 ... [that] breaks to allow the pad cover 40 to open toward the occupant’s side.” Furthermore, the burst-line 42 is not designed to allow the cover to flex when the cover moves between a normal position and a compressed position. Therefore, Ibe does not disclose a flex point. Thus, Ibe does not anticipate claims 34 and 50.

Because Ibe does not disclose each and every element as set forth in the claims 1-5, 8-20, 22-26, 28-38, 40-46, and 48-50, Ibe does not anticipate claims 1-5, 8-20, 22-26, 28-38, 40-46, and 48-50. Therefore, Applicants respectfully request that this rejection be withdrawn.

REJECTION OF CLAIMS 1, 4, 5, 8-14, 16-20, 22, 25, 26, 28-33, 37, 38, AND 40-49 UNDER 35 U.S.C §102(b)

In the Office Action, the Examiner rejected claims 1, 4, 5, 8-14, 16-20, 22, 25, 26, 28-33, 37, 38, and 40-49 under 35 U.S.C §102(b) as being anticipated by United States Patent No. 5,738,369 to Durrani (hereinafter "Durrani"). However, Durrani does not disclose each and every element as set forth in claims 1, 4, 5, 8-14, 16-20, 22, 25, 26, 28-33, 37, 38, and 40-49. As noted above, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131.

Independent claim 1 has been amended to provide "when the airbag cover is moved from the normal position to a compressed position a gap is produced at the interface between the airbag cover and the intermediate portion." Claims 4, 5, 8-14, and 16-20 depend from independent claim 1, and thus, also include this claim language. Durrani does not disclose a gap produced at the interface between the airbag cover and the intermediate portion when the airbag cover is moved from the normal position to a compressed position. Instead, Durrani discloses that the "interfitting rims 33, 34, 36 along with the inwardly ramped surfaces 30 and 32 further ensure proper positioning of the air bag cover 19, thus minimizing any gaps."

As discussed above, the claimed invention is able to provide the functional advantage of a gap separating the airbag module from the adjoining section of the steering wheel when depressing the airbag module from a normal to a compressed position without requiring closely held gaps and tolerances of mating surfaces. In contrast, the assembly of Durrani requires closely held tolerances. Specifically, the interfitting rims 33, 34, 36 along with the inwardly ramped surfaces 30 and 32 must have extremely tight tolerances in order to minimize gaps.

Furthermore, the Examiner did not assert that Durrani discloses a gap produced at the interface between the airbag cover and the intermediate portion when the airbag cover is moved from the normal position to a compressed position. Therefore, Durrani does not disclose each

and every element of claims 1, 4, 5, 8-14, and 16-20. Thus, Durrani does not anticipate claims 1, 4, 5, 8-14, and 16-20.

Independent claim 22 has been amended to provide “the intermediate portion comprising an overhanging portion constructed to overlap the airbag cover.” Claims 25, 26 and 28-32 depend from independent claim 22 and thus, also include this claim language. Similarly, claims 46 and 47 depend from independent claim 45, which provides “the overhang portion overlaps a portion of the airbag cover.” Durrani does not disclose this claim language.

In the Office Action on page 6, the Examiner stated that Durrani discloses an “intermediate portion [that] includes an overhanging portion (portion including #30).” However, the portion including #30 does not overlap the airbag cover #19. If #30 did overlap the airbag cover #19, assembly of the steering wheel would be extremely difficult if not impossible which would defeat the purpose of Durrani in column 2, lines 14-15, to provide “snap on assembly [as] a much simpler procedure than the prior art assembly. Therefore, Durrani does not disclose each and every element of claims 22, 25, 26, 28-32, and 45-47. Thus, Durrani does not anticipate claims 22, 25, 26, 28-32, and 45-47.

Independent claim 33 provides “an airbag cover ... comprising a shingle and ... the intermediate portion attached to the shingle.” Claims 37, 38, and 40-44 depend from independent claim 33 and thus also include this claim language. Similarly, claim 49 depends from claim 48 that provides “the intermediate portion attached to the shingle.” Durrani does not disclose this claim language.

In the Office Action on page 6, the Examiner stated that the “cover [of Durrani] comprises a “shingle” (portion near #32). However, claims 33, 37, 38, and 40-49 provide that the intermediate portion is attached to the shingle. Durrani, instead, discloses in column 2, lines 65-67, that “the inner-fitting rims 33, 34, and 36 secures the airbag cover 19, and ensures it is properly and accurately centered within the surfaces 30.” The portion near #32 is only used to guide the cover 19 into position. Durrani col. 2, lines 60-62.

As discussed above, by attaching the shingle to the intermediate portion loose tolerances may be used in manufacturing the claimed invention while extremely tight tolerances are required to minimize the gaps of Durrani. Consequently, Durrani does not disclose the



intermediate portion attached to the shingle. Therefore, Durrani does not disclose each and every element of claims 33-38 and 40-44. Thus, Durrani does not anticipate claims 33-38 and 40-44.

Because Durrani does not disclose each and every element as set forth in claims 1, 4, 5, 8-14, 16-20, 22, 25, 26, 28-33, 37, 38, and 40-49, Durrani does not anticipate these claims. Therefore, withdrawal of this rejection is respectfully requested.

**REJECTION OF CLAIMS 1, 4-6, 33, AND 37-39 UNDER 35 U.S.C. §102 (b)**

In the Office Action, the Examiner rejected claims 1, 4-6, 33, and 37-39 under 35 U.S.C. §102 (b) as being anticipated by United States Patent No. 5,228,362 to Chen et al. (hereinafter "Chen"). However, Chen does not disclose each and every element as set forth in claims 1, 4-6, 33, and 37-39. As noted above, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131.

Independent claim 1 has been amended to provide "the steering wheel being constructed such that there is no gap at the an interface between the airbag cover and the intermediate portion when the airbag cover is in the normal position, [and] when the airbag cover is moved from the normal position to a compressed position a gap is produced at the interface between the airbag cover and the intermediate portion." Claims 4-6 depend from independent claim 1 so also include this claim language. Chen does not disclose this claim language.

In the Office Action on page 6, the Examiner asserted that "no "gap" at interface between cover (#46) and intermediate portion (#50, 52) when the upper housing is in the normal position (best seen in figure 2) or in the compressed position (best seen in figure 3)." However, Chen expressly states that the "center pad 46 extends across the top of the well between the spokes and has marginal portions 50 and 52 extending outwardly of flanges 48 which overlies the horn switches 32 and terminate in outer edges 54 adjacent to the inner edges 26 of the spokes 18 and 20 to provide gaps 56 and 58 therebetween." As discussed on page 4 of the application:

a gap on a steering wheel has a further limitation in that over the life of the vehicle, containments such as dirt, dust, moisture, and the like tend to collect and accumulate within the steering wheel gap. This accumulation of dirt makes the steering wheel undesirable and visually unappealing to most consumers. ... In addition, placing a gap on the steering wheel is very inviting to curious children

and others that like to poke, pick, scratch, or otherwise tamper with the steering wheel.

The claimed invention on the other hand provides the functional advantage of a gap separating the airbag module from the adjoining section of the steering wheel when depressing the airbag module from a normal to a compressed position without requiring closely held gaps and tolerances of mating surfaces. Additionally, having no gap in the normal position prevents dirt, dust, moisture, and the like from accumulating within the steering wheel.

Therefore, Chen does not disclose that there is no gap at an interface between the airbag cover and the intermediate portion when the airbag cover is in the normal position. Consequently, Chen does not disclose each and every element of claims 1 and 4-6. Thus, Chen does not anticipate claims 1 and 4-6.

Independent claim 33 provides "an airbag cover ... comprising a shingle and ... the intermediate portion attached to the shingle." Claims 37-39 depend from independent claim 33 so also include this claim language. Similarly, claim 49 depends from claim 48 that provides "the intermediate portion attached to the shingle." Chen does not disclose this claim language.

In the Office Action on page 6, the Examiner stated that Chen discloses a "shingle (#54 or #48)." However, #54 and #48 of Chen do not contact the intermediate portion and are separated from the intermediate portion by the gaps 56 and 58. Therefore, #54 and #48 of Chen cannot be attached to the intermediate portion. Consequently, Chen does not disclose an intermediate portion attached to a shingle. Therefore, Chen does not disclose each and every element of claims 33 and 37-39. Thus, Chen does not anticipate claims 33 and 37-39.

The claimed invention provides the advantage over Chen of preventing the accumulation of dirt, moisture, and the like in a gap on the steering wheel. Because Chen does not disclose each and every element as set forth in claims 1, 4-6, 33, and 37-39, Chen does not anticipate these claims. Therefore, withdrawal of this rejection is respectfully requested.

#### REJECTION OF CLAIMS 7 AND 27 UNDER 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected claims 7 and 27 under 35 U.S.C. §103(a) as being unpatentable over Ibe. However, Ibe does not teach or suggest all of the elements of

claims 7 and 27. MPEP §2143 provides that a *prima facie* case of obviousness is established only if the Examiner shows that (1) there is some teaching, suggestion, or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference; (2) there is a reasonable expectation of success; and (3) the prior art teaches or suggests all of the claim elements.

Claim 1 has been amended to include the limitation of claim 7 and claim 7 has been canceled. Claim 1 as amended provides a “steering wheel being constructed such that there is no gap at the an interface between the airbag cover and the intermediate portion when the airbag cover is in the normal position, wherein when the airbag cover is moved from the normal position to a compressed position a gap is produced at the interface between the airbag cover and the intermediate portion.” Similarly, claim 27 provides “depressing the upper housing from the normal position to the compressed position produces a gap at the interface between the cover and the intermediate portion.” However, Ibe does not suggest or teach this claim language.

In fact, nowhere in the disclosure of Ibe is a gap suggested or taught, which the Examiner noted on page 7 by stating that Ibe does “not specifically disclose a “gap” being produced at the interface between the cover (#40) and the intermediate portions (#82A, 82B) when the upper housing is depressed from the normal to the compressed position.” MPEP §2143 expressly states that “the prior art reference (or the references when combined) must teach or suggest all the claim limitations.” Therefore, the Examiner has not established *prima facie* obviousness of claim 1 or claim 27, because Ibe does not disclose or suggest all of the claim elements.

Furthermore, the facts cited by the Examiner on page 7 of the Office Action that “the fixed connection between the intermediate portion (#82A, 82B) and the lower housing (#52), and the movement of the cover (#40) and the upper housing (#26, 46, 48A, 48B, 50) when a force acts on the cover” are not relevant to whether it would have been obvious to one of skill in the art to produce a gap between the cover and the intermediate portion when the cover is moved from a normal position to a compressed position. Specifically, the intermediate portions 82A and 82B abut the cover 40 on opposite sides. Furthermore, “the switch assemblies 82A and 82B are mounted to the bracket 52 ... and prevent falling-off of the pad member 24 from the metal core 12.” Ibe, column 6, lines 63-67. This teaching of Ibe coupled with the Figures of Ibe suggest

that no gap is produced when the cover or upper housing is depressed from the normal to the compressed position.

Additionally, the Examiner has not pointed to some teaching, suggestion, or motivation, either in Ibe itself or in the knowledge generally available to one of ordinary skill in the art, to modify Ibe as suggested by the Examiner.

In reference to claim 27, claim 27 depends from independent claim 22, which provides "an overhanging portion constructed to overlap the airbag cover such that there is no gap at the interface between the airbag cover and the intermediate portion when the airbag cover is in a normal position." Ibe does not disclose an overhanging portion that overlaps the airbag cover. Furthermore, the Examiner has not asserted that Ibe includes an overhanging portion that overlaps the airbag cover. Therefore, Ibe does not teach or suggest this claim element.

Because the Examiner has failed to show that there is some teaching, suggestion, or motivation to modify the reference and failed to show that the prior art teaches or suggests all of the claim elements, the Examiner has failed to establish the *prima facie* obviousness of claim 1 or claim 27. Withdrawal of this rejection is respectfully requested.

#### REJECTION OF CLAIM 21 UNDER 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected to claim 21 under 35 U.S.C. §103(a) as being unpatentable over Ibe in view of DE 19725684 C1 to Anglsperger et al. (hereinafter "Anglsperger"). As noted above, a claim cannot be rejected under 35 U.S.C. § 103(a) unless all of the claimed limitations are taught or suggested in the prior art. *See* MPEP § 2142.

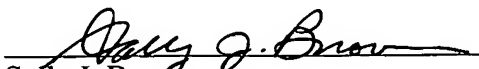
Claim 21 depends from claim 1, which provides "steering wheel being constructed such that there is no gap at the an interface between the airbag cover and the intermediate portion when the airbag cover is in the normal position, wherein when the airbag cover is moved from the normal position to a compressed position a gap is produced at the interface between the airbag cover and the intermediate portion." As explained above, this element is not taught or suggested by Ibe. Likewise, Applicants can find no teaching or suggestion in Anglsperger that relates to this element. Accordingly, because the combination of Ibe and Anglsperger does not teach or suggest all of the elements found in claim 21, this combination of references does not

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render claim 21 *prima facie* obvious under 35 U.S.C. § 103(a). Withdrawal of this rejection is respectfully requested.

Applicants respectfully requests that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,

  
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